Implementing RFID at Leeds Met

What benefits does the introduction of radio frequency identification bring to students, staff and university, and what should you be looking for in a supplier? **Helen Loughran** and **Dilys Young** take us through the Leeds Met experience.

Self-service facilities at Leeds Metropolitan University's

Self-service in the libraries at Leeds Metropolitan University was introduced in 2003. By the end of the 2004/05 academic year, around 70 per cent of routine circulation transactions were being carried out through self-service (excluding a/v materials which were not compatible with the hardware).

The main return on investment in self-service had been the release of staff time to help users operate the machines and to demonstrate the other benefits of self-service, e.g. placing holds and using the library catalogue effectively. This additional capacity had also enabled us to develop new services such as 'meeting & greeting' new students.

In 2005 several factors, including the push for longer hours and the need to enable short loans self-service overnight and during extended evening hours, and a wish to benefit from increased economies of scale, led us to review the technology. Radio frequency identification (RFID) had emerged as a new solution, providing increased throughput, ease of use for the customer and a range of enhancements as standard features. Providing this leading-edge technology in the Leeds Met Libraries would enhance their reputation and provide increased customer satisfaction.

After seeing RFID technology working at other universities a project team was formed to lead and steer the project. The process involved a number of site visits to university libraries at Leeds, Middlesex, Nottingham Trent and Hertfordshire as well as public libraries in Sutton and the specialist library at the Barbican. Members of the group also attended the CILIP RFID conference and a further seminar during 2005.

A tender document was drawn up with the university's financial services unit and computing services, and with help from another university. The tender took place in the summer/autumn of 2005 attracting five responses, from which a shortlist of three was compiled. In January/February 2006 the three suppliers were invited on site to give a series of presentations to staff. These were evaluated by the project team, with input from the staff groups who completed evaluations at each presentation.

Return on investment

Two main criteria were used to undertake the return on investment analysis: fitness for purpose/value for money; and price.

The evaluation scores were weighted to reflect the relative importance of these main criteria (75 per cent/25 per cent).

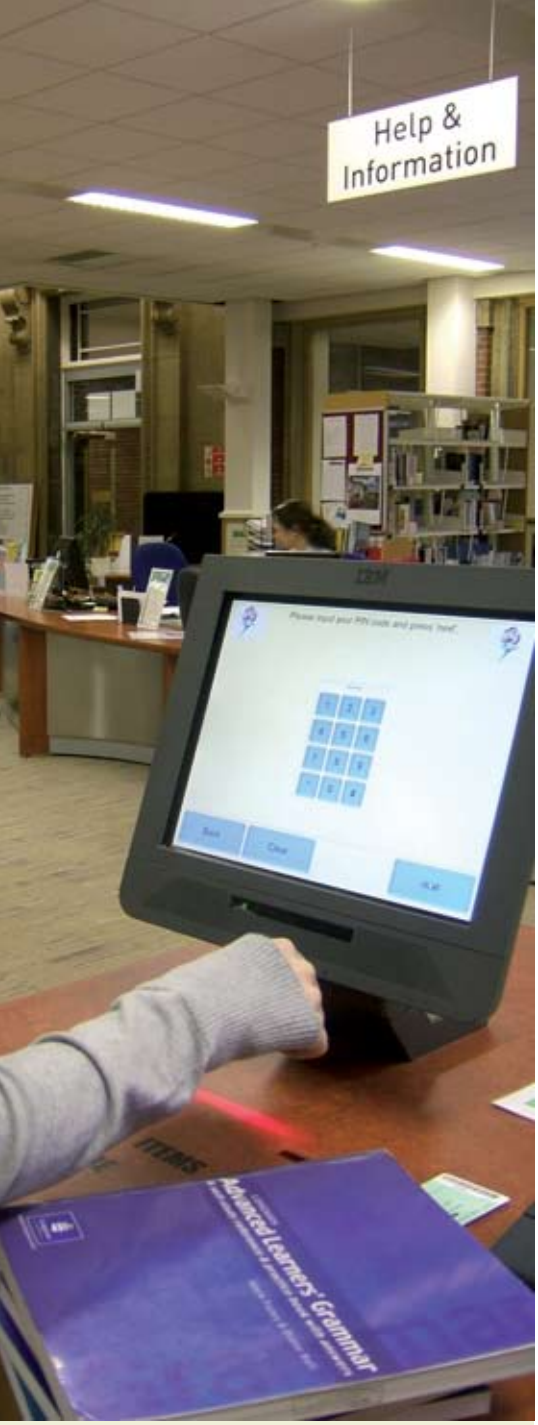
In terms of fitness for purpose, the main criteria were the student experience (quick and easy-to-use interface, availability of self-payment and easy renewals), the interface with Sirsi Unicorn (without which interoperability the system would not be effective), phasing, security gates and tag data.

Additional considerations of value for money were benefits associated with the student experience, resource exploitation and enhancing the reputation of Leeds Met and its libraries.

Students needed access to a wider range of services during unstaffed opening hours, such as payment of charges. As well as giving additional features, RFID offers faster and more effective throughput of items. It also features intuitive touchscreens, leading to fewer errors in checking out and returning materials, and so fewer alarms at the security gates.

Shorter queues

The significant speeding up of self-service at Leeds Met has meant that students are queuing for shorter times, fewer machines are needed (thus reducing ongoing costs) and, as the percentage of self-service transactions has risen, more staff time has become available for other student-facing activities. Queues range from 5-20 seconds for returns



Headingley Library.

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to between 10 seconds and two minutes for issues/renewals. We expect these waiting times to decrease further, especially for issues, as students become more experienced users.

Stock effectiveness is enhanced through the handheld stock management device or 'wand'. System suppliers estimate that between one and 12 per cent of stock is 'lost' through errors in cataloguing, labelling or shelving. For Leeds Met these figures represent around £77,500 of missing stock (at the one per cent level) to £930,750 (at the 12 per cent level).

The wand identifies errors quickly and effectively, releasing more stock to students and ensuring that additional copies are not purchased needlessly. Students and staff do not waste valuable time trying to find misplaced items, and shelf tidying and shelving activities become faster.

RFID represents state-of-the-art technology and employing it in the library service enhances the image of the university in what is a very competitive market. Library services are rated highly in student choice of university, and having state-of-the-art technologies which support extensive opening hours attracts students to Leeds Met.

Evaluation results and recommendations

Once the on-site demonstrations had been completed and the staff feedback collated, each supplier was scored on the criteria established. The project team eliminated the lowest scoring supplier at this stage, with the remaining two suppliers carried forward for further consideration and detailed discussions on phasing and implementation at additional meetings.

Following these further meetings the project team chose D-Tech as its preferred supplier based on the highly rated features demonstrated by its products. These included:

- an excellent, intuitive interface with a range of attractive features
- Sirsi interoperability established and demonstrated
- very fast printing, with simple roll insertion
- excellent security of a/v items, with range of tags available
- intelligent gates available.

We decided at this stage to concentrate on the implementation of student-focused self-service and put on hold purchase and implementation of the handheld devices in the first year. This allows time for D-Tech to carry out further development of the device to reflect our requirements more closely. We hope to be beta-testing a new model during the summer.

In choosing D-Tech we also considered the following:

- its ability to deliver the range of products immediately, having already undertaken a range of development work with our library management system supplier SirsiDynix
- its ability to offer us 'hybrid' security gates which would enhance detection for the bookstock via RFID, while protecting the journal stock with the existing tattle protection system, thus alleviating the need for tagging journals and reference stock
- its existing implementation of the technology at Middlesex University
- its commitment to the project and ability to meet our demanding timescales
- the potential for cross-sectoral working – D-Tech is also implementing its system at Somerset County Council.

Implementation

A detailed implementation plan was drawn up to map the project to the time-scales. The tender was awarded to D-Tech in April and we began implementation almost immediately.

We decided to tag stock at the shelves rather than move items to the counter. This involved loading the conversion software on to laptops which we could then connect to the wireless network on each floor of the libraries as the tagging progressed. The implementation plan identified the number of items which would need to be tagged on an hourly, daily and weekly basis, and staff worked long and hard throughout the hot summer to meet our target of around 350,000 items in four months. Everyone, from the head of department to vacation evening staff helped. We actually tagged 357,000 items in 16 weeks at the three libraries, the workforce supplemented only by two temporary staff at one library for the final three weeks to cover staff leave.

Staff training took place in early September and we went live with the student self-service stations at lunchtime on Saturday 16 September, just a day and a half before the new students arrived.

Student feedback

While staff were exhausted by the project, the feedback from students helped them realise their efforts had all been worthwhile. Comments such as 'wicked', 'awesome' and 'really cool' were common, and initial concerns about there not being enough machines (the increased throughput had meant we purchased one less machine for each library than we had had before) were soon dispelled as students got used to the new system, finding it both quicker and easier to use than the previous one.

Future developments

We look forward to working with D-Tech to develop the handheld device for stock management and exploitation, and are looking at options to introduce self-payment by card so that fines are no longer a barrier to self-service.

We are also examining whether we can integrate our short loan collections into the main sequence so that students can use all materials effectively. Finally we are considering self-pick-up of holds, currently a mediated service which is not available during our unstaffed, security-only opening times.

RFID technology has opened our eyes to a range of new ways of working and helped us provide services which students want and find effective and easy to use. We are very proud of what we've achieved and would be happy to share our experiences with others who want to visit us here at Leeds Met.

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